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Background: Malignant pleural mesothelioma (MPM) is an uncommon but extremely aggressive tumor of the pleura which has been closely linked to asbestos exposure. Over the last decade, a variety of receptor tyrosine kinases have been identified to play a central role in various aspects of tumorigenesis. One of these, EGFR, is overexpressed in the majority of MPMs and appears to play an important role in the pathogenesis of the disease. The aim of the present study was to investigate the potential value of tissue and serum EGFR for the diagnosis of MPM and to assess its predictive value in relation to survival.

Methods: We prospectively investigated 90 cases of pathologically-proven MPM presenting at NCI Cairo. All cases were confirmed using immunohistochemical markers. Epithelioid cases were positive to calretinin, mesothelioma antigen, keratin 5/6 and negative to epithelial membrane antigen and/or cytokeratin and/or CEA. Sarcomatoid cases were diagnosed by being positive for mesothelioma antigen and negative for vimentin. Out of the 90 MPM cases, 71 and 40 had undergone determination of the EGFR on the tissue and serum respectively.

Results. Major clinical characteristics in MPM patients were: a median age 46, range (26-77) years, a M/F ratio 1.7:1, 28.2% of the cases were early stage, 35% had a performance status 2 and 70% gave a history of asbestos exposure. 57.8% of the cases were epithelioid, 23.3% were mixed, and 7.8% were sarcomatoid. Among all treated patients, the overall response rate (RR) was 32.8%. After a median follow up of 29 months, the median overall survival (MOS) was 10 months. Using a cut-off point of 2.5 ng/ml for EGFR in serum (corresponding to the median of marker concentration in MPM), it was found to be significantly associated with advanced stage. Using a normal cut-off value >0.23 ng/ml, a borderline significance with response to treatment was found. EGFR overexpression in tissues and high serum levels were not associated with unfavorable survival outcome. We have previously studied the correlation between EGFR overexpression EGFR in tissue samples in a subset group of this series for a shorter follow-up period (median follow-up), and we reported a highly significant relation between EGFR expression and the OS rate. However, on a prospective, longer follow-up of these patients this significant association was not revealed.

Conclusions: 1- A high pretreatment levels of serum EGFR are associated with poor prognosis and unfavorable response to treatment but not with reduced OS. 2- Although increased EGFR expression in tissues is significantly associated with OS rates in a short follow-up period, this significant relation is not revealed on a long term follow-up. The explanation of this needs detailed genetic studies to determine the exact genetic defects (mutations or SNP) that might contribute to poor survival rather than protein overexpression.

P1-120 Mesothelioma and Other Thoracic Malignancy Posters, Mon, Sept 3

Pathology of mediastinal tumors: a five-year review of 79 cases

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Background: Primary mass lesions arising from the mediastinum are uncommon. Their origins vary and they have multiple manifestations. Studies reporting these tumors are few and tumor registries provide an objective collection method to elucidate their characteristics.

Methods: A comprehensive review of all mediastinal lesions in the tumor registry of the Philippine Heart Center was undertaken and analyzed, which covered a 5-year period (2001-2006).

Results: Seventy-nine mediastinal mass lesions from patients who underwent thoracotomy at our center were analyzed during the review period. Fifty-two (65.8%) were benign and the rest were malignant. Thymoma, 24 (30.4%) was the most common tumor in the series and was noted more on the female population. For the pediatric age group, the most common lesion was teratoma, 5 (55.6%). Non-Hodgkins lymphoma, 10 (12.7%) was the most common malignancy encountered in the entire population. Other pathologies encountered were mature teratoma, thymic carcinoma, Hodgkins lymphoma, thymic cysts, thymic carcinoid, teratocarcinoma, aberrant thyroid tissue, neurogenic tumors, vascular malformations, small cell carcinoma, lipoma, spindle cell tumor, bronchogenic cyst, and non-specific inflammatory lesion. Seventy-five (94.9%) of these tumors are located in the anterior mediastinum, 3 (3.8%) are in the posterior compartment, and only 1 (1.3%) arose from the superior portion. Immunohistochemical staining was done in most of the malignant lesions which included cytokeratin, CD 3, CD 20, CD 15, CD 30, and LCA. The mean age was 39 (9 months - 87 years). There were 34 males (43%) and 45 females (57%). Nine (11.4%) belong to the pediatric age group (18 years old and below) and 70 belong to the adult age group. Majority of these patients presented with dyspnea and cough. A few had incidental finding on routine radio-logic examination.

Conclusion: Majority of the masses in the mediastinum arose from its anterior compartment and thymic lesions were mostly encountered. Thymomas constituted the majority of lesions among adults while teratomas predominate in the pediatric age group. Lymphomas were the most common malignancies in both populations. These differences should be considered when evaluating patients with mediastinal lesions.

P1-121 Mesothelioma and Other Thoracic Malignancy Posters, Mon, Sept 3

Accuracy of pleural biopsy by thoracoscopy for the diagnosis of histological subtype in malignant pleural mesothelioma

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Background: Promising results, even debated and not yet uniformly replicated, with trimodality treatment combining extra pleural pneumonectomy (EPP), chemotherapy, and radiotherapy have been obtained in the management of malignant pleural mesothelioma (MPM). Nevertheless several prognostic parameters have to be taken into account before this aggressive management. Among them the histological subtype of the disease has an influence on the patient's outcome with pejorative prognosis for non epithelial type. The aim of the present study was to retrospectively investigate the accuracy of thoracoscopy pleural biopsy for the diagnosis and histological subtype of MPM.

Methods: The histological reports of all consecutive patients undergoing an 'intention-to-treat' surgery, i.e. EPP, pleurectomy (P), pleurectomy/decortication (P/D) from three institutions as well as the initial pathological diagnosis obtained by thoracoscopy were reviewed and compared after institutional review board approval. All cases of MPM were confirmed by a panel of pathologists (the "Mesopath" panel in France).